

Amendments to the Claims:

Please cancel claims 1-6, 10-13, and 16-18 without prejudice or disclaimer. This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1-6. (Cancelled)

7. (Original) A calibration method for use in a head loading/unloading type disk apparatus having a voice coil motor for driving a carriage to move a head in a direction of radius of a disk, a voice coil motor velocity detection circuit for detecting a voice coil motor velocity corresponding to a back electromotive force of the voice coil motor, and a ramp mechanism arranged outside an outer periphery of the disk to retract the head, comprising the steps of:

executing, at the start of loading control for loading the head from the ramp mechanism onto the disk, calibration for correcting a relationship between a value of a voice coil motor current flowing through the voice coil motor and the voice coil motor velocity detection value detected by the voice coil motor velocity detection circuit, said calibration being executed by obtaining a voice coil motor velocity detection value detected by the voice coil motor velocity detection circuit in a state where an actual velocity of the voice coil motor is set to zero and a current is supplied to the voice coil motor;

reading out the voice coil motor velocity detection value immediately after loading control is switched to on-track control from the voice coil motor velocity detection circuit and storing the readout value in a memory; and

monitoring the voice coil motor velocity detection value detected by the voice coil motor velocity detection circuit while the head is positioned on the disk and, if an absolute value of a difference between the monitored voice coil motor velocity detection value and the voice coil motor velocity detection value stored in said memory is not less than a prescribed value, reexecuting said calibration.

8. (Original) A method according to claim 7, wherein if the absolute value of the difference between the monitored voice coil motor velocity detection value and the voice coil motor velocity detection value stored in said memory is not less than the prescribed value, the carriage is moved to an inner-periphery stopper position to reexecute said calibration.

9. (Original) A method according to claim 7, wherein if the absolute value of the difference between the monitored voice coil motor velocity detection value and the voice coil motor velocity detection value stored in said memory is not less than the prescribed value, unloading is performed and the carriage is moved to an outer-periphery stopper position to reexecute said calibration, and reloading is performed after the reexecution.

10-13. (Cancelled)

14. (Original) A calibration method for use in a head loading/unloading type disk apparatus having a voice coil motor for driving a carriage to move a head in a direction of radius of a disk, a voice coil motor velocity detection circuit for detecting a voice coil motor velocity corresponding to a back electromotive force of the voice coil motor, and a ramp mechanism arranged outside an outer periphery of the disk to retract the head, comprising the steps of:

executing, at the start of loading control for loading the head from the ramp mechanism onto the disk, calibration for correcting a relationship between a value of a voice coil motor current flowing through the voice coil motor and the voice coil motor velocity detection value detected by the voice coil motor velocity detection circuit, said calibration being executed by obtaining a voice coil motor velocity detection value detected by the voice coil motor velocity detection circuit in a state where an actual velocity of the voice coil motor is set to zero and a current is supplied to the voice coil motor;

reading out the voice coil motor velocity detection value immediately after loading control is switched to on-track control from the voice coil motor velocity detection circuit and storing the readout value in a memory; and

monitoring the voice coil motor velocity detection value detected by the voice coil motor velocity detection circuit when an unload instruction is received and, if an absolute value of a difference between the monitored voice coil motor velocity detection value and the voice coil

motor velocity detection value stored in said memory is not less than a prescribed value, reexecuting said calibration and performing unloading thereafter.

15. (Original) A method according to claim 14, wherein the carriage is moved to an inner-periphery stopper position to reexecute said calibration when the unload instruction is received.

16-18. (Cancelled)

19. (Original) A head loading/unloading type disk apparatus comprising:
a voice coil motor for driving a carriage to move a head in a direction of radius of a disk;
a voice coil motor velocity detection circuit for detecting a voice coil motor velocity corresponding to a back electromotive force of the voice coil motor;
a ramp mechanism arranged outside an outer periphery of the disk to retract the head;
a memory; and
a controller for, at the start of loading control for loading the head from the ramp mechanism onto the disk, executing calibration for correcting a relationship between a value of a voice coil motor current flowing through the voice coil motor and the voice coil motor velocity detection value detected by the voice coil motor velocity detection circuit, said calibration being executed by obtaining a voice coil motor velocity detection value detected by the voice coil motor velocity detection circuit in a state where an actual velocity of the voice coil motor is set to zero and a current is supplied to the voice coil motor, and, immediately after switching from loading control to on-track control, reading out the voice coil motor velocity detection value from the voice coil motor velocity detection circuit and storing the readout value into said memory, monitoring the voice coil motor velocity detection value detected by the voice coil motor velocity detection circuit while the head is positioned on the disk, and reexecuting said calibration if an absolute value of a difference between the monitored voice coil motor velocity detection value and the voice coil motor velocity detection value stored in said memory is not less than a prescribed value .